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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/461,625	12/14/1999	JOHN I. GARNEY	2207/7562	4071

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333 W SAN CARLOS STREET
SUITE 600
SAN JOSE, CA 951102711

EXAMINER

PHILPOTT, JUSTIN M

ART UNIT	PAPER NUMBER
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2616

DATE MAILED: 07/24/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/461,625

Applicant(s)

GARNEY ET AL.

Examiner

Justin M. Philpott

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 July 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-21, 23-31 and 33-44 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2-21, 23-31 and 33-44 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed June 2, 2006 have been fully considered but they are not persuasive for the reasons discussed in the following.
2. First, arguments aside, it should be noted that in applicant's response of June 2, 2006, no amendment to the claims has been made. Accordingly, while applicant has labeled the response "Amendment" (on page 1) and recites, "Amendments to the claims begin on page 2 of this paper" (on page 1), this label and statement are misplaced because no amendment to the claims has been made in the response of June 2, 2006.
3. Turning to applicant's arguments (on pages 11-14), applicant first argues that Kim does not teach that the first transaction is repeated. This argument is not persuasive for the following reason. Kim clearly teaches performing a first transaction (e.g., see col. 3, lines 23-42 regarding main hub 20 which is "adapted to perform upstream communication and downstream processing" between host controller and device 40"). Additionally, Kim teaches not only one device, but a plurality of devices 40 have communications (see FIG. 1 clearly showing a plurality of devices 40). Further, Kim teaches communicating between the host controller and other of the plurality of devices 40 (e.g., see col. 2, line 64 – col. 3, line 22 regarding "plurality of peripheral devices" and "additional peripheral devices"). Finally, Kim teaches only one input and output terminal is used at a single time (e.g., see col. 6, lines 32-39). Thus, in order to communicate between the host controller and each of the other plurality of devices 40 (which Kim clearly

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teaches occurs, as discussed above), such communications would involve the same transaction but must occur at a *different* time. Accordingly, applicant's argument is not persuasive.

4. Additionally, applicant argues that the transaction occurring at a different time is not between the "same host controller and the same hub". However, as shown in Kim at FIG. 1, there is only *one* host controller (clearly labeled as "host controller 11" in FIG. 1), and there is only *one* main hub unit (clearly labeled as "main USB hub unit 20") by which communications reach each of a plurality of the first-level devices 40 (shown at the bottom of FIG. 1 with two of devices 40 followed by "... " implying still additional devices 40). Thus, for those first-level devices 40, the transaction must occur between the same host controller (i.e., host controller 11) and the same hub (i.e., main USB hub unit 20) as the other first-level devices 40. Accordingly, applicant's argument is not persuasive.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 2-4, 33-35, 42 and 44 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,064,554 to Kim.

Regarding claim 42, Kim teaches a method for communicating data between a host and an agent, the method comprising: performing a first transaction (e.g., data transfer) at a first time

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between a host controller (e.g., host controller 11, see FIG. 1) and a hub (e.g., hub 20), the first transaction initiated by the host controller (e.g., host controller 11, see col. 3, lines 23-42 regarding “host controller assigns ... and performs a correct data transfer” with the device 40 via hub 20); performing a second transaction between the hub (e.g., hub 20) and an agent (e.g., device 40) based on the first transaction at the first time (e.g., see col. 3, lines 23-42 regarding hub 20 which is “adapted to perform upstream communication and downstream processing” between host controller 11 and device 40); and repeating, by the host controller (e.g., host controller 11), the first transaction at a second time (e.g., see col. 6, lines 32-39 regarding only one input and output terminal is used at a single time; thus, requiring other terminals to other devices 40 to be used at a second/different time) between the host controller (e.g., host controller 11) and the hub (e.g., hub 20) (e.g., see col. 3, lines 11-22 regarding connecting host controller 11 to each of a plurality of devices 40, performed via the above-mentioned transaction steps).

Regarding claim 44, Kim teaches a system comprising the method discussed above regarding claim 42, and further, teaches both a first hub controller and a second hub controller (e.g., see Hub Controller 100 in FIG. 2; Hubs 20 and 30 in FIG. 1; and see col. 3, lines 53-55 regarding hubs 20 and 30 being illustrated by FIG. 2, indicating each of hubs 20 and 30 comprise the Hub Controller 100 in FIG. 2) adapted to perform the above-mentioned transaction steps.

Regarding claims 2, 3, 33 and 34, the first/second transactions are inherently performed at first/second communication speeds or in accordance with first/second protocols.

Regarding claims 4 and 35, Kim teaches performing a third transaction (e.g., overcurrent protection steps, see col. 5, line 1 – col. 6, line 32) between the first transaction at the first time and the first transaction at the second time (e.g., see col. 6, lines 32-39 regarding only one input

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and output terminal is used at a single time; thus, the overcurrent protection steps, or third transaction, following the first transaction is performed with a first device, and is further not performed with a second device until the second transaction couples the hub to a second device 40).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 23-25 and 43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kim in view of U.S. Patent No. 6,289,466 to Bayramoglu et al.

Regarding claim 43, Kim teaches a system comprising the method discussed above regarding claim 42. That is, as discussed above, Kim teaches a method for communicating data between a host and an agent, the method comprising: performing a first transaction (e.g., data transfer) at a first time between a host controller (e.g., host controller 11, see FIG. 1) and a hub (e.g., hub 20), the first transaction initiated by the host controller (e.g., host controller 11, see col. 3, lines 23-42 regarding “host controller assigns ... and performs a correct data transfer” with the device 40 via hub 20); performing a second transaction between the hub (e.g., hub 20) and an agent (e.g., device 40) based on the first transaction at the first time (e.g., see col. 3, lines 23-42 regarding hub 20 which is “adapted to perform upstream communication and downstream processing” between host controller 11 and device 40); and repeating, by the host controller (e.g.,

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host controller 11), the first transaction at a second time between the host controller (e.g., host controller 11) and the hub (e.g., hub 20) (e.g., see col. 3, lines 11-22 regarding connecting host controller 11 to each of a plurality of devices 40, performed via the above-mentioned transaction steps).

However, Kim may not specifically disclose the host controller utilizes a device driver for performing the transactions.

Bayramoglu, like Kim, also teaches a system comprising a host controller (e.g., host controller 118, see FIG. 5) coupled with a hub (e.g., hub 300), and further, specifically discloses the transactions between the host controller and the hub are operated by a device driver (e.g., see FIG. 5 regarding “USB driver stack” and specifically, “Host Cntlr Driver (UHCD.SYS)” 420). Additionally, the teachings of Bayramoglu provide system monitoring for improved performance (e.g., see col. 1, line 18 – col. 4, line 5). Thus, at the time of the invention it would have been obvious to one of ordinary skill in the art to utilizes a device driver for performing the transactions of Kim, as taught by Bayramoglu, in order to provide system monitoring for improved performance (e.g., see col. 1, line 18 – col. 4, line 5).

Regarding claims 23 and 24, the first/second transactions are inherently performed at first/second communication speeds or in accordance with first/second protocols.

Regarding claim 25, Kim teaches performing a third transaction (e.g., overcurrent protection steps, see col. 5, line 1 – col. 6, line 32) between the first transaction at the first time and the first transaction at the second time (e.g., see col. 6, lines 32-39 regarding only one input and output terminal is used at a single time; thus, the overcurrent protection steps, or third transaction, following the first transaction is performed with a first device, and is further not

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performed with a second device until the second transaction couples the hub to a second device 40).

9. Claims 5-21 and 36-41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kim in view of U.S. Patent No. 5,832,492 to Wooten.

Regarding claims 5-10 and 36-41, Kim teaches the method discussed above regarding claims 42 and 44, however, may not specifically disclose the information sent comprises token packets with identification information and a transfer indicator indicating that data needs to be transferred, and at least one of an acknowledgement, handshake indication, or a timeout indication.

Wooten, like Kim, teaches methods for USB communications (e.g., see col. 3, line 30 – col. 15, line 57), and specifically, teaches information sent comprises token packets (e.g., see col. 6, lines 26-27 regarding token packets) implicitly comprising identification information and a transfer indicator indicating that data needs to be transferred (e.g., see col. 6, lines 30-31 regarding token packets allowing transfer of data packets), and a handshake indication (e.g., handshake packet, see col. 6, lines 26-33). The teachings of Wooten provide a method for USB communications with reduced memory access and size requirements (e.g., see col. 3, lines 1-67). Thus, at the time of the invention it would have been obvious to one of ordinary skill in the art to apply the USB communication teachings of Wooten to the USB communication teachings of Kim in order to provide USB communications with reduced memory access and size requirements (e.g., see col. 3, lines 1-67).

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Regarding claims 11-21, Kim teaches the method discussed above regarding claims 42 and 44, however, may not specifically disclose receiving at the host controller from the agent a request to perform the transactions, and generating a frame template and performing the transactions periodically in accordance with specific time periods. As discussed above, Wooten, like Kim, also teaches methods for USB communications (e.g., see col. 3, line 30 – col. 15, line 57). Specifically, Wooten teaches receiving at the host controller from the agent a request to perform the transactions (e.g., see col. 6, lines 17-21 regarding device-initiated communications), and generating a frame template and performing the transactions periodically in accordance with specific time periods (e.g., see col. 6, lines 5-9 regarding periodic communications). As discussed above, the teachings of Wooten provide a method for USB communications with reduced memory access and size requirements (e.g., see col. 3, lines 1-67). Thus, at the time of the invention it would have been obvious to one of ordinary skill in the art to apply the USB communication teachings of Wooten to the USB communication teachings of Kim in order to provide USB communications with reduced memory access and size requirements. Furthermore, it is generally considered to be within the ordinary skill in the art to adjust, vary, select or optimize the numerical parameters or values of any system absent a showing of criticality in a particular recited value. The burden of showing criticality is on Appellant. In re Mason, 87 F.2d 370, 32 USPQ 242 (CCPA 1937); Marconi Wireless Telegraph Co. v. U.S., 320 U.S. 1, 57 USPQ 471 (1943); In re Schneider, 148 F.2d 108, 65 USPQ 129 (CCPA 1945); In re Aller, 220 F.2d 454, 105 USPQ 233 (CCPA 1955); In re Saether, 492 F.2d 849, 181 USPQ 36 (CCPA 1974); In re Antonie, 559 F.2d 618, 195 USPQ 6 (CCPA 1977); In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980). Thus, at the time of the invention it would have been obvious to one

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of ordinary skill in the art to configure frame templates according to various particular time periods, since it is generally considered to be within the ordinary skill in the art to adjust, vary, select or optimize the numerical parameters or values of any system absent a showing of criticality in a particular recited value.

10. Claims 26-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kim in view of Bayramoglu, further in view of Wooten Claims 5-21 and 36-41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kim in view of U.S. Patent No. 5,832,492 to Wooten.

Regarding claims 26-31, Kim in view of Bayramoglu teaches the method discussed above regarding claim 43, however, may not specifically disclose the information sent comprises token packets with identification information and a transfer indicator indicating that data needs to be transferred, and at least one of an acknowledgement, handshake indication, or a timeout indication.

Wooten, like Kim and Bayramoglu, teaches methods for USB communications (e.g., see col. 3, line 30 – col. 15, line 57), and specifically, teaches information sent comprises token packets (e.g., see col. 6, lines 26-27 regarding token packets) implicitly comprising identification information and a transfer indicator indicating that data needs to be transferred (e.g., see col. 6, lines 30-31 regarding token packets allowing transfer of data packets), and a handshake indication (e.g., handshake packet, see col. 6, lines 26-33). The teachings of Wooten provide a method for USB communications with reduced memory access and size requirements (e.g., see col. 3, lines 1-67). Thus, at the time of the invention it would have been obvious to one of ordinary skill in the art to apply the USB communication teachings of Wooten to the USB

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communication teachings of Kim in view of Bayramoglu in order to provide USB

communications with reduced memory access and size requirements (e.g., see col. 3, lines 1-67).

Double Patenting

11. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

12. Claim 42 is rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1 and 3-5 of U.S. Patent No. 6,792,495 to Garney et al.

Although the conflicting claims are not identical, they are not patentably distinct from each other because the patented claim 4 (depending upon and including all limitations of claims 1 and 3) includes each of the limitations of applicant’s pending claim 42, such as a host controller (patent claim 1, line 2 regarding “host” and line 6 regarding “controller”) performing a transaction (patent claim 1, lines 2, 3, 5, 6, 8, 9 regarding “transaction”) between the host controller and a hub (patent claim 1, line 12 regarding “hub”), and further performing a transaction with an agent

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(patent claim 4, line 3 regarding “agent”) and repeating the transaction (patent claim 5 regarding updating information). Further, any variations between claim language of the instant application and that of the above-mentioned patent are obvious variations which are not patentably distinct.

13. Additionally, claim 42 is rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 1 of U.S. Patent No. 6,813,251 to Garney et al.

Although the conflicting claims are not identical, they are not patentably distinct from each other because the patented claim 1 includes each of the limitations of applicant’s pending claim 42, such as a host controller (patent claim 1, lines 6-7 regarding “host controller”) performing a first transaction (patent claim 1, lines 6-7 “first transaction”) between the host controller and a hub (patent claim 1, lines 6-7 regarding “between the host controller and a hub”), and further performing a transaction with an agent (patent claim 1, lines 8-9 regarding “agent transaction between the hub and the agent based on the first transaction”) and repeating the transaction (patent claim 1, lines 10-15 regarding a “second transaction ... between the host controller and the hub”). Further, any variations between claim language of the instant application and that of the above-mentioned patent are obvious variations which are not patentably distinct.

14. Also, independent claims 43 and 44 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1 and 3-5 of U.S. Patent No. 6,792,495 to Garney et al. and unpatentable over claim 1 of U.S. Patent No. 6,813,251 to Garney et al. for the same reasons discussed above with respect to claim 42, wherein any variations between claim language of the instant application and that of the above-mentioned patents are obvious variations which are not patentably distinct.

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15. Finally, dependent claims 2-10, 23-31 and 33-41 (each of which depend upon one of independent claims 42-44) are rejected for their dependence upon one of the rejected claims 42-44 and for the same reasons discussed above.

Conclusion

16. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

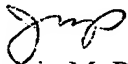
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Justin M. Philpott whose telephone number is 571.272.3162. The examiner can normally be reached on M-F, 9:00am-5:00pm.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi Pham can be reached on 571.272.3179. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



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7/20/07